

REMARKS

Claims 1-6 and 8 are pending in this application. By this Amendment, claims 1 and 8 are amended and claim 7 is canceled without prejudice to or disclaimer of the subject matter recited therein. Support for the amendments to claim 1 can be found in Applicants' specification in paragraph [0028] and Fig. 2, for example. No new matter is added by these amendments. Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

The Office Action rejects claims 1-3 and 7 under 35 U.S.C. §102(b), and alternatively under 35 U.S.C. §103(a), over U.S. Patent No. 3,911,187 to Raley; and rejects claims 4-6 and 8 under 35 U.S.C. §103(a) over Raley. The rejections are respectfully traversed.

Independent claim 1 recites a wafer protective sheet that has flat parts oriented parallel to and between the projected parts and the recessed parts.

Raley discloses a thermoplastic film having a plurality of alternating top walls 18 and depressions 14 intersecting in a lattice strip pattern. However, Raley does not have flat parts oriented parallel to and between the top walls 18 and the depressions 14. The Office Action, on page 3, asserts that the projections and/or recesses of Raley are flat as seen in Fig. 2. However, Raley does not disclose a thermoplastic film in which the flat parts exist between the top walls 18 and the depressions 14, as recited in independent claim 1 and as illustrated in Applicants' Fig. 2 (i.e., flat parts 7).

Moreover, the wafer protective sheet recited in independent claim 1 is not obvious and/or reasonably predictable based on the disclosure of Raley. Raley adopts a structure of sidewalls of protuberances and depressions that are planarly connected, because the object of Raley is to achieve a film that is not susceptible to edge-curl when stress or pull is applied to the film (*see* Raley col. 1, lines 13-40).

On the other hand, the wafer protective sheet according to claim 1 is able to prevent wafers from being scratched, is easy to handle by automated machinery, reusable and does not adhere to the wafers. The claimed wafer sheet has a large number of arrayed projected parts, flat parts and recessed parts to provide an appropriate bending resistance and to enable the wafer sheet to be restored to its original state once a pressure is removed. (For example, see Applicants' specification paragraphs [0008] and [0009].)

Therefore, even though the thermoplastic film described by Raley is used as a wafer protective sheet, it is considered that the top walls 18 and the depressions 14 keep their original shapes or they are crushed by pressure, so that it cannot be considered that they become flat or substantially flat. For this reason, Raley's thermoplastic film cannot be expected to show the effect of at the time of taking out the wafer protective sheet, the projections and recesses of the thermoplastic film are restored to the original states and the film is avoided from adhering to the wafers. Thus, it would not be reasonably predictable for one of ordinary skill in the art to expect the wafer protective sheet of claim 1 from the thermoplastic film of Raley.

Further, claims 2-8, which depend from claim 1, are also patentable over Raley for at least the reasons discussed above, as well as for the additional features recited therein. Accordingly, Applicants respectfully request that the rejections be withdrawn.

The Office Action, on page 4, rejects claims 1-8 under 35 U.S.C. §102(b), or alternatively under 35 U.S.C. §103(a), over U.S. Patent No. 6,286,684 to Brooks et al. (hereinafter "Brooks"). The rejection is respectfully traversed.

Independent claim 1 recites a wafer protective sheet that has flat parts oriented parallel to and between the projected parts and the recessed parts.

Brooks discloses a film for protecting a product wafer from electrostatic discharge and the film comprises two layers, a dissipative layer 51 and an insulating layer 53. Brooks

Figs. 9 and 12 disclose that the film can be in an arrangement such that a plurality of projected parts and a plurality of recessed parts are in a strip pattern. However, Brooks fails to disclose or suggest flat parts oriented parallel to and between the projected parts and the recessed parts, as recited in independent claim 1. Therefore, Brooks fails to disclose the above-mentioned features.

Moreover, the wafer protective sheet according to claim 1 is not obvious in view of Brooks. The film shown in Brooks Figs. 9 and 12 comprises two layers, a dissipative layer 51 and an insulating layer 53, in order to protect the product wafer from electrostatic discharge. Although the wafer protective sheet according to claim 1 has an embodiment of providing antistatic property by coating the sheet with a material having an antistatic property, such an embodiment would not have made it obvious or reasonably predictable for one of ordinary skill in the art to achieve the wafer protective sheet structure of claim 1 from Brooks' disclosure.


The two layer structure of Brook's wafer protective sheet is susceptible to problems associated with the layers becoming separated and costs increased due to the increase of processing steps, as described in Applicants' paragraph [0024]. However, with regard to the wafer protective sheet in independent claim 1 the synthetic resin compound is prepared by kneading the antistatic material with the synthetic resin and thus it is possible to avoid the problems associated with the two layer structure disclosed in Brooks. (*See Applicants' specification paragraph [0024].*) Thus, it would not be reasonably predictable for one of ordinary skill in the art to expect the wafer protective sheet of claim 1 from the wafer protective sheet of Brooks.

Further, claims 2-8, which depend from independent claim 1, are also patentable over Brooks for at least the reasons discussed above, as well as for the additional features recited therein. Accordingly, Applicants respectfully request that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 and 8 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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